REMARKS

Claims 17-61 are pending in the present application. In the Office Action dated May 20, 2005, claims 17-55 were rejected under the judicially create doctrine of obviousness-type double patenting as being unpatentable over claims 1-19 of U.S. Patent No. 6,468,453 B1. Claim 18 was objected to because of the following informality. The second occurrence of the limitations "the full length of" should be deleted on line 3 of claim 18. Claims 19, 25 and 32 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Claim 17, 18 and 31 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,962,941 to Kober ("Kober") in view of U.S. Patent No. 4,580,374 to Quinnell ("Quinnell"). Claims 20-22 and 33-55 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kober in view of Quinnell and U.S. Patent No. 4,246,815 to Hugo ("Hugo") when taken in view of the applicants' admitted prior art. Claims 23 and 24 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kober in view of Quinnell and U.S. Patent No. 4,985,119 to Vinson et al. (Vinson). Claims 26-30 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kober in view of Quinnell, Vinson and Hugo when taken in view of the applicants' admitted prior art.

Double Patenting Rejection

As a preliminary matter, applicants are filing a terminal disclaimer to obviate the double patenting rejection. Applicants have also filed a corrective assignment so that title is correctly held by Shear Tech, Inc. for both the present application and its parent (U.S. Patent No. 6,468,453). A revocation and substitute power of attorney is also filed herewith. Therefore, the undersigned is now an attorney of record and may properly sign the terminal disclaimer.

Objections to Claims and Specification

Applicants have corrected the typographical error pointed out by the examiner in claims 18, 48, and 55. Additionally, the amendments to claims 17 and 23 correct a typographical error by amending the term "surface" to "plate." Accordingly, the amendments to claim 18, 48, and 55 are not made for reasons related to patentability.

Applicants' Embodiments and Cited References

The embodiments disclosed in the present application will now be discussed in comparison to the cited references. Of course, the discussion of the disclosed embodiments, and the discussion of the differences between the disclosed embodiments and the cited references, does not define the scope or interpretation of any of the claims. Instead, such discussed differences merely help the Examiner appreciate important claim distinctions discussed thereafter.

According to one embodiment, a method of forming a plurality of holes in a fiber-cement panel is disclosed. A fiber-cement panel having a length, width, and thickness is provided. The fiber-cement panel is placed between a support assembly and a punch assembly. An actuator drives punches of the punch assembly into the fiber-cement panel until the punches penetrate through at least a portion of the fiber-cement panel to form a plurality of holes. In some embodiments, a biasing element surrounds each of the punches. In operation, the biasing element is compressed against the fiber-cement panel as the punches penetrate the fiber-cement panel to enable withdrawing the punches from the fiber-cement panel without delaminating portions adjacent the holes. In one embodiment, the punches of the punch assembly only penetrate through a portion of the fiber-cement panel, such as 20-70 percent of the thickness of the fiber-cement panel. In another embodiment, the punches may penetrate completely through the thickness of the fiber-cement panel.

In another embodiment, the support assembly includes a support plate having a plurality of holes having a first cross-sectional dimension. The punch assembly includes a plurality of punches having a second cross-sectional dimension less than the first cross-sectional dimension. When the punches of the punch assembly penetrate the panel to form a plurality of holes, at the side of the panel proximate the punch assembly, the hole has the second dimension of the punches while on the opposing side proximate the support plate, the hole has the first dimension. In such an embodiment, the radial punch/hole clearance between the punches and the holes is large enough to reduce the binding between the punches and the fiber-cement panel.

The combination of Kober, Quinnell, and the other cited references do not teach using a punch assembly to form soffits from a fiber-cement panel as disclosed in applicants' embodiments. The examiner has cited Kober for teaching a method of forming a hole in an asbestos fiber plate using a punch assembly. Quinnell is cited by the examiner for purportedly teaching a soffit and fascia system formed of cement-based asbestos boards for use as soffit

boards. The examiner asserts that the combination of Kober and Quinnell teaches using the method of Kober to punch holes in the cement-based asbestos boards of Quinnell to form a soffit.

As best shown in Figures 6 and 7 of Quinnell, a soffit-fascia system is disclosed in which soffit boards 6 formed of cement-based asbestos are received by a fascia 3 and surround a portion of the periphery of a ventilator panel 18. The ventilator panel 18 is formed of molded polypropylene and includes a plurality of ventilator slots 22. Thus, the cement-based asbestos soffit boards 6 do not appear to have any ventilator slots formed therein. Ventilation for the soffit-fascia system is provided by the ventilator slots 22 formed in the plastic ventilator panel 18. It is noted that the portion cited by the examiner for purportedly teaching soffits formed from cement-based asbestos materials (col. 1, ll. 15-28 and col. 2, ll. 25-38) does not in fact disclose that the ventilator slots or holes of the soffit are formed in the cement-based asbestos material. In particular, the portion at col. 2, lines 25-38 of Quinnell cited by the examiner merely discloses that the cement-based asbestos soffit board 6 may have a groove (i.e., groove 16) to help retain it on the fascia 3.

There is no motivation or suggestion in the references at the time of the applicants' invention to employ the punching method of Kober to form a plurality of holes in the cement-based asbestos soffit boards 6 of Quinnell for several reasons. First, Quinnell clearly teaches away from punching holes in the cement-based asbestos soffit boards 6 by using a molded polypropylene ventilator panel 18. There does not appear to be any ventilator slots in the cement-based asbestos soffit boards 6.

Second, at the time of the applicants' invention, one of ordinary skill in the art would not be motivated to punch holes in the cement-based asbestos soffit boards 6 of Quinnell because of the known toxicity of asbestos. Employing the punching method taught by Kober to form holes in cement-based asbestos soffit boards 6 of Quinnell would generate hazardous asbestos airborne particles. Certainly, at the time of the applicants' invention (application filed on January 4, 2002), one skilled in the art would appreciate the hazardous nature of punching holes in asbestos based materials and they would not choose to form holes using an aggressive punching method. As evidence that one skilled in the art would not use such a process on asbestos based materials, a 37 C.F.R. § 1.132 declaration that was accepted by an examiner in another patent that was directed to siding formed from fiber-cement materials is submitted herewith. Quinnell also appears to recognize the problems with asbestos so it teaches forming

the ventilator portion of the soffit from a non-hazardous material (*i.e.*, polypropylene) and because it appears to not even drive nails into the cement-based asbestos soffit boards 6 to secure it to another structure.

Third, the cement-based asbestos soffit boards 6 are generally very brittle. One of ordinary skill in the art would not use a punching method for punching holes in the cement-based asbestos soffit boards 6 because of the propensity of the cement-based asbestos soffit boards 6 to fracture when punched. Certainly, one skilled in the art would not form the high density hole arrangements disclosed in some of applicants' embodiments in cement-based asbestos panels due to the inherently brittle characteristics cement-based asbestos materials disclosed in the cited references.

If the Kober and Quinnell are in fact combinable, the combination would teach one of ordinary skill in the art to form slots or holes in the ventilator panel 18 of Quinnell using the punching method of Kober. Accordingly, the combination of Kober and Quinnell do not teach using a punch assembly to form soffits from a fiber-cement panel as disclosed in applicants' embodiments. The other cited references do not appear to remedy the deficiencies present in the teachings of Kober and Quinnell.

The examiner has also cited Hugo in combination with Kober and Quinnell for purportedly providing the teaching of a support assembly having a plurality of holes each having a cross-sectional dimension larger than that of the punches that are received by a corresponding hole. The motivation provided by the examiner for combining the teaching of Hugo is to substantially reduce the breakage rate of the punches. However, Hugo does not provide any motivation or suggestion for modifying the support assembly of Kober so that the holes in the support assembly of Kober each have a cross-sectional dimension larger than that of the punches in order to reduce the breakage rate of the punches. Instead, Hugo teaches that the problem of punches breaking should be solved by providing a lateral punch support (horizontal stripper plate 30). If any motivation is present for combining Hugo with Kober and the other cited references, it would be to provide a lateral punch support with the punch and support assembly of Kober. Accordingly, the combination of Hugo, Kober, and Quinnell does not teach a support assembly having a plurality of holes each having a cross-sectional dimension larger than that of the punches that are received by a corresponding hole as disclosed in applicants' embodiments. Any assertion that Hugo teaches providing a support assembly having a plurality of holes each with a cross-sectional dimension larger than that of the punches would clearly be the result of hindsight.

Claims and Rejections

Turning now to the claims, the patentably distinct differences between the cited references and the claim language will be specifically pointed out. Claim 17 recites, in part, "providing a fiber-cement panel having a length, a width and a thickness, wherein the thickness is approximately 0.25-0.625 inch; placing the fiber-cement panel between a punch assembly and a support assembly, the punch assembly having a punch plate and a plurality of punches coupled to the punch plate, and the support assembly having a support plate with a plurality of holes; and driving the punches at least substantially simultaneously into and through at least a portion of the thickness of the fiber-cement panel to form a plurality of apertures in the fiber-cement panel by ejecting plugs from the fiber-cement panel through the holes in the support plate." As discussed above, the combination of the cited references does not teach or fairly suggest punching holes in a fiber-cement panel to form a soffit.

Claim 23, recites, in part, "providing a fiber-cement panel having a thickness of approximately 0.25 to 0.625 inch, the fiber-cement panel comprising cement, cellulose material, and a binder; placing the fiber-cement panel between a punch assembly and a support assembly, the punch assembly having a punch plate and a plurality of punches coupled to the punch plate, and the support assembly having a support plate with a plurality of holes; driving the punches at least substantially simultaneously through at least a portion of the thickness of the fiber-cement panel to form apertures in the fiber-cement panel by ejecting plugs from the fiber-cement panel through the holes in the support plate; and withdrawing the punches from the fiber-cement panel without delaminating the fiber-cement panel at the apertures." As discussed above, the combination of the cited references does not teach or fairly suggest punching holes in a fiber-cement panel to form a soffit.

Claim 31, recites, in part, "placing a fiber-cement panel between a punch assembly and a support assembly, the punch assembly having a punch plate and a plurality of punches projecting from the punch plate, and the support assembly having a support plate with a plurality of holes; and forming a plurality of apertures in the fiber-cement panel at least substantially simultaneously by driving the punches at least substantially simultaneously through only a portion of the fiber-cement panel without passing the punches completely through the panel." As discussed above, the combination of the cited references does not teach or fairly suggest punching holes in a fiber-cement panel to form a soffit.

Claim 38, recites, in part, "providing a fiber-cement panel having a thickness of approximately 0.25-0.625 inch; placing a fiber-cement panel between a punch assembly and a support assembly so that a first side of the panel faces the punch assembly and a second side of the panel faces the support assembly, the punch assembly having a punch plate and a plurality of punches coupled to the punch plate, and the support assembly having a support plate with a plurality of holes; and driving the punches through at least a portion of the thickness of the fiber-cement panel at least substantially simultaneously to form a plurality of tapered openings in the fiber-cement panel." As discussed above, the combination of the cited references does not teach or fairly suggest punching holes in a fiber-cement panel to form a soffit.

Claim 42 recites, in part, "placing a fiber-cement panel between a punch assembly and a support assembly so that a first side of the panel faces the punch assembly and a second side of the panel faces the support assembly, the punch assembly having a punch plate and a plurality of punches having a first cross-sectional dimension coupled to the punch plate, and the support assembly having a support plate with a plurality of holes having a second cross-sectional dimension larger than the first cross-sectional dimension of the punches; and driving the punches through at least a portion of the fiber-cement panel at least substantially simultaneously to form a plurality of openings in the fiber-cement panel that have the first dimension of the punches at the first side of the panel and the second dimension of the holes at the second side of the panel." In addition to the cited references not teaching or suggesting driving punches through a fiber-cement panel to form a soffit, the cited references also fail to disclose or fairly suggest all of the limitations of claim 42. Furthermore, there is no motivation or suggestion to combine the cited references to achieve the invention of claim 42.

As discussed above, there is no motivation or suggestion in Hugo to modify Kober so that the support assembly thereof has holes each with a cross-sectional dimension larger than a cross-sectional dimension of a corresponding punch. The combination of Hugo and Kober would clearly result in employing the lateral punch support (horizontal stripper plate 30) of Hugo with the punch and support assembly of Kober and would not result in the invention of claim 42. Additionally, the cited references and in particular Hugo, does not disclose or fairly suggest "driving the punches through at least a portion of the fiber-cement panel at least substantially simultaneously to form a plurality of openings in the fiber-cement panel that have the first dimension of the punches at the first side of the panel and the second dimension of the

holes at the second side of the panel." Close examination of Figure 3 of Hugo shows that the diameter of the hole formed in the workpiece W proximate the die plate 20 is less than that of diameter of the die cavity 21. In contrast, claim 42 requires that a plurality of openings in the fiber-cement panel are formed, each of which has the first dimension of the punches at the first side of the panel and the second dimension of the holes at the second side of the panel.

Claim 49 recites, in part, "placing the fiber-cement panel between a punch assembly and a support assembly so that a first side of the panel faces the punch assembly and a second side of the panel faces the support assembly, the punch assembly having a punch plate and a plurality of punches having a first cross-sectional dimension coupled to the punch plate, and the support assembly having a support plate with a plurality of holes having a second cross-sectional dimension larger than the first cross-sectional dimension of the punches; driving the punches along a punch stroke through at least a portion of the thickness of the fiber-cement panel at least substantially simultaneously to form a plurality of openings in the fiber-cement panel that have the first dimension of the punches at the first side of the panel and the second dimension of the holes at the second side of the panel; and pressing a compressible biasing element against the first side of the fiber-cement panel as the punches move along the punch stroke." In addition to the cited references not teaching or suggesting driving punches through a fiber-cement panel to form a soffit, the cited references also fail to disclose or fairly suggest all of the limitations of claim 49. Furthermore, there is no motivation or suggestion to combine the cited references to achieve the invention of claim 49.

As discussed above, there is no motivation or suggestion in Hugo to modify Kober so that the support assembly thereof has holes each with a cross-sectional dimension larger than a cross-sectional dimension of a corresponding punch. Additionally, the cited references and in particular Hugo, does not disclose or fairly suggest forming a plurality of openings in the fiber-cement panel having the geometry required by claim 49.

Claims depending from the independent claims are also allowable due to depending from an allowable base claim and further in view of the additional limitations recited in the dependent claims.

Rejections Under 35 U.S.C. 112, second paragraph

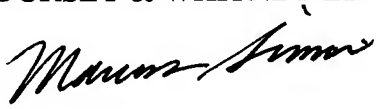
With regard to the claim rejections under 35 U.S.C. 112, second paragraph, claims 19, 25, and 32 have been amended to correct the typographical error pointed out by the examiner and to recite that the punches penetrate into the panel a depth of approximately 0.0625-

0.1875 inch. Accordingly, the amendment to claims 19, 25, and 32 are not for reasons related to patentability, but merely correct a typographical error.

All of the claims remaining in the application (claims 17-55) are now clearly allowable. Favorable consideration and a timely Notice of Allowance are earnestly solicited.

Respectfully submitted,

DORSEY & WHITNEY LLP



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